## **ABSTRACT**

Methods of diagnostic investigation of a sample from a biological organism are described, which comprise the steps of determining at least one physical quantity of said sample, wherein said at least one physical quantity characterizes an interaction of said sample with sound waves, and correlating said at least one physical quantity with reference data, which characterize at least one condition of said sample or said organism, for obtaining at least one diagnostic characteristic. Furthermore, diagnostic devices are investigating biological samples with such methods are described.